

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014110**Date Inspected:** 25-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Yu Dong Ping  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A

**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 10:

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified North Tower Lift 4 123M Double Diaphragm. The weld designations reviewed are as follows.

NSTL4-3B/L-2A/B

NDT Notification No: 005128.

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% and randomly Visual Testing of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified East Tower Lift 4 D/E Corner joint from inside. The weld designations reviewed are as follows.

ESTL4-2B/L-61B (Repairing Position)

NDT Notification No: 005122

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This QA Inspector observed the following work in progress:

### BAY 11

This QA Inspector observed ZPMC qualified welding personnel identified as 049220. Perform Flux Core Arc Welding (FCAW) on East Tower lift 4 back fill plate weld. Joint identified as ESTL4-2J/L-44, near Diaphragm 139M Bottom. ZPMC QC Identified as Xu Jin Lang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-F-4333-TC-U4-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 046775. Perform Flux Core Arc Welding (FCAW) on East Tower lift 4 back fill plate weld. Joint identified as ESTL4-2L/L-110, near Diaphragm 135M Top. ZPMC QC Identified as Xu Jin Lang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-F-4333-TC-U4-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 040611. Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 4 back fill plate weld. Joint identified as ESTL4-2F/L-44, ZPMC QC Identified as Lijun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-B-U2b-1.

### Repair Welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 049099. Perform Shielded Metal Arc Welding (SMAW) on West Tower Lift 4 B/C Corner joint, Joint identified as WSTL4-2B/L-58A/B. ZPMC QC Identified as Peng Guo, with welding repair report. WRR-T-WR3041. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-2G (2F) Repair.

### BAY 10

This QA Inspector observed ZPMC qualified welding personnel identified as 050289, 040582. Perform Shielded Metal Arc Welding (SMAW) on South Tower Lift 5 B/C corner joint. Joint identified as SSD1-TL5-1B-F-38B, ZPMC QC Identified as Deng Zhi Bing. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-TC-U4b-1

This QA Inspector observed ZPMC qualified welding personnel identified as 066236. Perform Flux Core Arc Welding (FCAW) on North Tower Lift 4 Back fill plate welding from inside near Diaphragm 143M Top. Joint identified as NSTL4-3K/L-21, ZPMC QC Identified as Sun Tian Liang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-4332-TC-P4-F.

### BAY 11

During in process visual inspection (in Bay 11); the below mentioned activity was noted, which did not appear to comply with the applicable contract document.

Base Metal Repairs were performed without prior approval from the Engineer. Base Metal Repairs were performed using the Shielded Metal Arc Welding (SMAW) process where East Tower Lift 4 Skin E, on the 485 grade material. The following Skin Plate were repaired: EAST TOWER LIFT 4 SKIN E,

This QA informed ZPMC Quality Control (QC) identified as Mr. An Qing Xiang and American Bridge Fluor (ABF) QA identified as Mr. Man Kam Hen of this issue and that an incident report would be generated.

For further information, please see the attached photos.

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Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer